

## CLAIMS

What is claimed is:

1. A computer-implemented warranty knowledge base construction system, comprising:

a user interface for receiving a first rule related to vehicle repair claim processing;

5 a rules syntax data store that stores syntax rules for constructing repair claim-related rules;

a knowledge base generator module connected to the user interface and to the rules syntax data store for determining whether the first rule is in an acceptable syntax based upon the stored syntax rules;

10 wherein the first rule is used in a knowledge base system to process repair claims.

2. The system of claim 1 wherein a knowledge base stores a plurality of repair claim-related expert rules to evaluate a repair claim, said system further comprising:

an integrity rules module connected to the knowledge base generator module in order to determine whether the first rule is consistent with respect to at least one of the warranty-related expert rules that is stored in the knowledge base.

3. The system of claim 2 wherein the first rule is incorporated into the knowledge base, said system further comprising:

a testing module for testing the knowledge base with testing scenarios.

4. The system of claim 2 wherein the first rule is incorporated into the knowledge base, said system further comprising:

a testing module for performing regression testing of the knowledge base.

5. The system of claim 2 further comprising:

a reverse engineer module for generating a specification for the knowledge base.

6. The system of claim 5 wherein the specification for the knowledge base includes warranty methods and warranty business rules.

7. The system of claim 2 wherein the first rule contains a high level computer expression, said knowledge base generator evaluating the high level expression as to whether the high level expression of the first rule is in an acceptable syntax based upon the stored syntax rules.

8. The system of claim 7 wherein the knowledge base generator generates a lower level representation of the first rule if the first rule is in an acceptable syntax.

9. The system of claim 8 wherein the high level computer expression of the first rule is an English phrase, wherein the lower level representation of the first rule is at least one line of programming code.

10. The system of claim 9 wherein the programming code is C++ programming code.

11. A computer-implemented warranty knowledge base construction method, comprising the steps of:

receiving a first rule related to vehicle repair claim processing;

storing syntax rules for constructing repair claim-related rules;

5 determining whether the first rule is in an acceptable syntax based upon the stored syntax rules;

wherein the first rule is used in a knowledge base method to process repair claims.

12. The method of claim 11 wherein a knowledge base stores a plurality of repair claim-related expert rules to evaluate a repair claim, said method further comprising the steps of:

5 determining whether the first rule is consistent with respect to at least one of the warranty-related expert rules that is stored in the knowledge base.

13. The method of claim 12 wherein the first rule is incorporated into the knowledge base, said method further comprising the steps of:

testing the knowledge base with testing scenarios.

14. The method of claim 12 wherein the first rule is incorporated into the knowledge base, said method further comprising the steps of:

performing regression testing of the knowledge base.

15. The method of claim 12 further comprising the steps of:  
using a reverse engineer module for generating a specification for  
the knowledge base.

16. The method of claim 15 wherein the specification for the  
knowledge base includes warranty methods and warranty business rules.

17. The method of claim 12 wherein the first rule contains a high  
level computer expression, said method further comprising the step of:

evaluating the high level expression as to whether the high level  
expression of the first rule is in an acceptable syntax based upon the stored syntax  
rules.

18. The method of claim 17 further comprising the step of:  
generating a lower level representation of the first rule if the first rule  
is in an acceptable syntax.

19. The method of claim 18 wherein the high level computer  
expression of the first rule is an English phrase, wherein the lower level  
representation of the first rule is at least one line of programming code.

20. The method of claim 19 wherein the programming code is C++  
programming code.